

ABSTRACT OF THE DISCLOSURE

Disclosed are polyester-ether polyols and their use in urethane prepolymers, urethane foams and non-foam urethane coatings, adhesives, sealants and/or elastomers. Methods for producing such polyester-ether polyols using double metal cyanide catalysts are disclosed, along with methods for producing urethane prepolymers. The polyester-ether polyols of the instant invention are preferably the reaction product of phthalic anhydride, diethylene glycol, and propylene oxide. These polyester-ether polyols are useful as either the primary polyol in urethane compositions or in combination with conventional auxiliary polyester- and/or polyether-based polyols. The polyester-ether polyols impart greatly improved solubility and compatibility to mixtures of either polyether and/or polyester polyols. The polyester-ether polyols of the instant invention are desirably of lower viscosity than their precursor intermediate polyester polyols and are generally soluble in either polyester- and/or polyether-based polyols. Additionally, the polyester-ether polyols generally provide improved hydrolytic stability to CASE materials in which they are utilized.